IN THE CLAIMS:

The following is a listing of all the claims as they currently stand.

1. (Previously presented) A catheter comprising:

a flexible body comprising a proximal end and a distal end;

a rigid housing rotatably coupled to the distal end of the flexible body, the housing having a window; and

a tissue debulking assembly disposed at least partially within the rigid housing, the tissue debulking assembly being movable from a first position to a second position, the debulking assembly being positioned within the window in the first position and extending out of the window in the second position, the debulking assembly changing an angular orientation of the rigid housing relative to the flexible body when moving from the first position to the second position.

2. (Original) The catheter of claim 1 wherein the tissue debulking assembly comprises a rotatable cutter.

3. (Original) The catheter of claim 2 wherein the housing and flexible body define a channel having a longitudinal axis, the catheter further comprising a drive shaft positioned within the channel, wherein the drive shaft is attachable to a driver for rotating the cutter.

4. (Original) The catheter of claim 3 wherein the rigid housing deflects in a direction opposite of the window about an axis that is substantially orthogonal to the longitudinal axis of the flexible body so as to position the cutter adjacent a target tissue.

5. (Previously presented) The catheter of claim 1 wherein the rigid housing is coupled to the flexible body with a joint, wherein movement of the tissue debulking assembly from the first position to the second position actuates deflection of the rigid housing about the joint.

6. (Original) The catheter of claim 5 further comprising a ramp positioned on the rigid housing opposite of the window, wherein proximal movement of the tissue debulking assembly over the ramp deflects the rigid housing and exposes the tissue debulking assembly out of the window.

7. (Canceled).

8. (Canceled).

9. (Previously presented) The catheter of claim 1 wherein the tissue debulking assembly changes the angular orientation of a longitudinal axis of the debulking assembly relative to the longitudinal axis of the rigid housing when moving from the first position to the second position.

10. (Previously presented) The catheter of claim 1 wherein the tissue debulking assembly in the second position moves a longitudinal axis of the rigid housing to an offset parallel position relative to the longitudinal axis of the tissue debulking assembly.

11. (Original) The catheter of claim 1 further comprising a flexible distal tip coupled to the rigid housing, wherein at least one of the distal tip and rigid housing comprise a collection chamber.

12. (Original) The catheter of claim 11 wherein the flexible distal tip and flexible body comprise lumens for receiving a guidewire.

13. (Original) The catheter of claim 1 wherein the tissue debulking assembly comprises a RF electrode, a laser, or an ultrasound emitter.

14-23. (Canceled).

24. (Withdrawn) A catheter for removing material from a body lumen, the catheter comprising:

a body comprising a proximal portion, a distal portion, an inner channel defining a longitudinal axis, and a side opening cutting window disposed on the distal portion of the body;

a cam;

a drive shaft positioned within the inner channel , wherein a proximal end of the drive shaft is attachable to a drive motor; and

a rotatable and axially movable cutter coupled to a distal end of the drive shaft, wherein the rotatable cutter is movable over the cam to deflect the distal portion relative to the proximal portion and expose the cutter through the cutting window.

25. (Withdrawn) The catheter of claim 24 wherein the distal portion is pivotally coupled to the proximal portion via a pivot joint.

26. (Withdrawn) The catheter of claim 25 wherein the joint is positioned proximal of the cutting window.

27. (Withdrawn) The catheter of claim 25 wherein the distal portion of the housing is rotated about the joint and is urged against the body lumen when the cutter is exposed out of the cutting window.

28. (Withdrawn) The catheter of claim 25 further comprising a flexible distal tip attached to the distal portion, wherein the proximal portion is flexible and the distal portion is rigid.

29. (Withdrawn) The catheter of claim 28 wherein the rigid distal portion has a length between approximately 6 mm and 8 mm.

30. (Withdrawn) The catheter of claim 24 wherein the cutter has a serrated cutting edge.

31. (Withdrawn) The catheter of claim 24 wherein the cutter has a smooth cutting edge.

32. (Original) A catheter comprising:

a flexible body comprising a proximal end and a distal end;

a rigid housing rotatably coupled to the distal end of the flexible body, the housing comprising a cutting window; and

a debulking assembly movably disposed within the rigid housing, wherein movement of the debulking assembly from a first position to a second position rotates the rigid housing relative to the flexible body.

33. (Original) The catheter of claim 32 further comprising a ramp in the rigid housing, wherein movement of the debulking assembly over the ramp moves the debulking assembly out of the cutting window beyond an outer diameter of the rigid housing.

34. (Original) The catheter of claim 32 wherein the first position is distal to the second position, wherein the debulking assembly in the first distal position closes the cutting window.

35. (Original) The catheter of claim 32 wherein the housing and flexible body define a channel, wherein the debulking assembly is a rotatable cutter, the catheter further comprising a drive shaft positioned within the channel and attachable to a drive unit for rotating the cutter.

36. (Original) The catheter of claim 35 wherein the housing defines a longitudinal axis, wherein the cutter and drive shaft are rotatable about the longitudinal axis.

37. (Original) The catheter of claim 36 wherein the cutter pivots about an axis that is orthogonal to the longitudinal axis when the cutter moves out of the cutting window.

38. (Original) The catheter of claim 37 wherein the rigid housing comprises a flexible joint, wherein moving the cutter rotates the housing about the flexible joint.

39. (Previously presented) A method of removing material from a body lumen, the method comprising:

delivering a catheter comprising a tissue debulking device to a target site in the body lumen;

deflecting a distal portion of the catheter relative to a proximal portion of the catheter to expose the tissue debulking device; and

debulking the body lumen by rotating the tissue debulking device about a first axis and exposing the tissue debulking device through a cutting window in the catheter.

40. (Canceled).

41. (Previously presented) The method of claim 39 wherein exposing comprises sliding the tissue debulking device against a cam surface.

42. (Previously presented) The method of claim 39 wherein the first axis is a longitudinal axis of the catheter.

43. (Previously presented) The method of claim 39 further comprising advancing the catheter in the body lumen to move the rotating tissue debulking device through material in the body lumen.

44. (Original) The method of claim 39 further comprising packing severed material into a collection chamber.

45. (Original) The method of claim 39 wherein deflecting comprises urging the tissue debulking device against the material in the body lumen.

46. (Original) The method of claim 39 wherein delivering comprises attaching a guidewire to a monorail delivery assembly on the catheter.

47. (Original) The method of claim 39 wherein the target site is a stent.

48. (Original) The method of claim 39 wherein deflecting is carried out by moving the tissue debulking device from a first position to a second position.

49-60. (Canceled).

61. (Withdrawn) A kit comprising:

a catheter comprising a proximal portion rotatably coupled to a distal portion, wherein the distal portion includes a side-opening window and a tissue debulking device;

instructions for use in removing occlusive material from a body lumen comprising moving the tissue debulking device from a first position to a second position so as to expose the tissue debulking device through the window and to rotate the distal portion relative to the proximal portion, and advancing the catheter through the body lumen to contact the tissue removal device with the occlusive material; and

a package for holding the catheter and instructions.

62. (Currently amended) A method of debulking a body lumen, the method comprising:

providing a catheter having a rotating cutter, a collection chamber, and a cutting window, the collection chamber being distal to the cutting window, the rotating cutter being movable between a stored position and an exposed position, at least part of the rotating cutter becoming exposed through the cutting window when moving to the exposed position;

exposing the cutter by moving the cutter to the exposed position; and

advancing the catheter in a distal direction to move the rotating cutter through occlusive material in the body lumen, the rotating cutter remaining in the exposed position so that the cutter and the window maintain their orientation with respect to one another when advancing the catheter through the occlusive material, the occlusive material cut by the rotating cutter being directed through the cutting window and distally into the collection chamber as the catheter is advanced in the distal direction through the occlusive material.

63. (Original) A method of debulking a body lumen, the method comprising:

moving a rotating cutter out of a side facing cutting window in a catheter;

deflecting a distal portion of the catheter to urge the cutter toward a target material; and

advancing the cutter through the material by moving the catheter.

64. (Original) The method of claim 63 wherein the catheter defines a longitudinal axis, wherein urging comprises deflecting the distal portion of the catheter off of the longitudinal axis.

65. (Original) The method of claim 64 wherein moving comprises moving the cutter off of the longitudinal axis.

66. (Original) The method of claim 63 wherein moving comprises pivoting the cutter out of the cutting window.

67. (Original) The method of claim 63 wherein advancing comprises moving the entire catheter distally through the body lumen.

68. (Original) The method of claim 63 further comprising packing material into a collection chamber.

69. (Currently amended) A method of removing material from a vascular location, comprising the steps of:

providing a debulking catheter having a body, an opening leading to a collection chamber, and a cutter, the collection chamber being distal to the opening, the cutter being movable between a stored position and an exposed position, the cutter becoming at least partially exposed when moving from the stored position to the exposed position;

introducing the debulking catheter into a patient's vascular system with the cutter in the stored position, the debulking catheter being introduced to a vascular location where material is to be removed;

exposing the cutter by moving the cutter to the exposed position;

rotating the cutter; and

advancing the debulking catheter in a distal direction after the exposing step and during the rotating step, wherein the rotating cutter and the opening advance together so that material cut by the rotating cutter is directed through the opening and distally into the collection chamber as the catheter is advanced.

70. (Previously presented) The method of claim 69, wherein:

the advancing step is carried out with the rotating cutter remaining in the exposed position so that the cutter and opening move together while cutting the material from the vascular location.

71. (Previously presented) The method of claim 69, wherein:

the providing step is carried out with the opening being a side opening on the catheter; and

the moving step being carried out with part of the cutter becoming exposed through the side opening when moving to the exposed position.

72. (Previously presented) The method of claim 69, further comprising the step of:

urging the opening toward the area where material is to be removed;

the advancing step being carried out while urging the opening toward the area where material is to be removed.

73. (Canceled)

74. (New) The method of claim 62, wherein:

the providing step is carried out with the opening being a side opening on the catheter; and

the moving step being carried out with part of the cutter becoming exposed through the side opening when moving to the exposed position.